

THE PORT AUTHORITY
OF NY & NJ



ORIGINAL SIGNED & SEALED BY
N.Y. P.E. (OR R.A.)

**Joseph R. Loring
& Associates, Inc.**
consulting engineers

One Pennsylvania Plaza
New York, New York 10119-0043
Tel: 212 363-7400, Fax: 212 363-7782

THE OFFICE OF
DAVID
ELLIOT
LEBOWITZ
PC

LESLIE E ROBERTSON
ASSOCIATES, R.L.P.
CONSULTING STRUCTURAL ENGINEERS
30 EAST 47TH STREET
NEW YORK, NY 10017-1000
TEL: 212 688-0000 FAX: 212 688-0000

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT
COPY OF ONE OF THE CONTRACT DRAWINGS
SITUATING A PART OF CONTRACT NO. WTC-845-071
IN THE FORM IN WHICH SAID DRAWINGS EXISTED AT
THE TIME THE SAID CONTRACT WAS EXECUTED BY
THE PARTIES
DATE 11/17/97 *Signature*
DATE 4/10/98 *Signature*
EXPERIENCE OF DESIGN

12/12/97 WTC F.O. TANK PIPES
11/17/97 ISSUED FOR BID
No. Date Revision Approved
Engineering Department
Design Divisions
**The
World
Trade
Center**

STANDBY POWER
5 WORLD TRADE CENTER
MECHANICAL
5 WTC PART PLAN
B2 LEVEL FUEL
OIL TANK ROOM

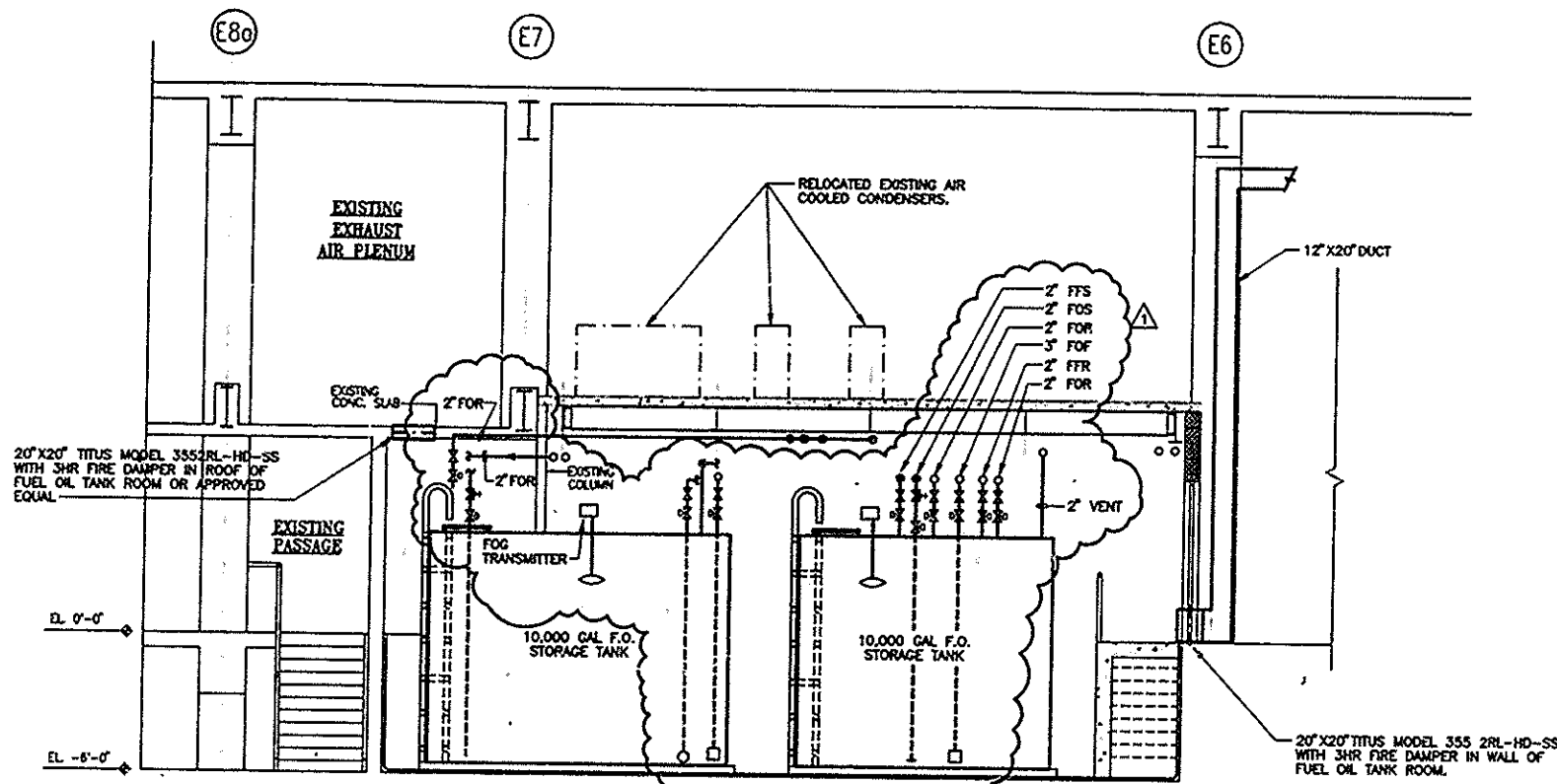
This drawing subject to conditions in contract.
All inventions, ideas, designs and methods
herein are reserved to Port Authority and
may not be used without its written consent.

J.D. D.H.B.
Designed by Drawn by Check by
Date 11/17/97 Scale AS NOTED
Contract Number WTC-845-071 Drawing Number M1-02

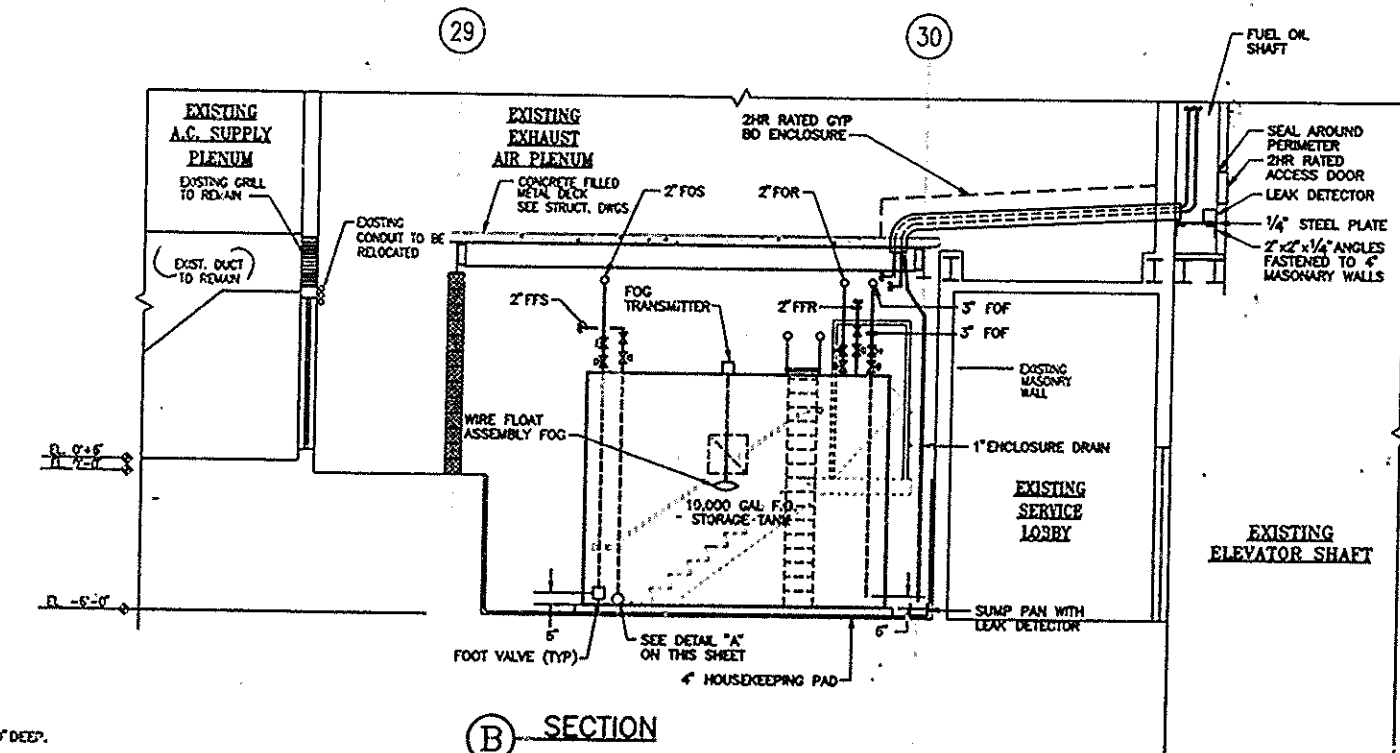
PUMP SCHEDULE									
BASIS OF DESIGN: PREFERRED UTILITIES									
PUMP NO.	LOCATION	GPM	TOTAL HEAD (FT.)	NPSH REQ'D (FT.)	OPERATING PRESS. (PSIG)	FLUID TEMP. (°F)	MOTOR DATA HP	VOLT/PH	REMARKS
FP-1	B2 LEVEL TRANSFER SET	1800	175	-	200	70	5	480/3	1140 POSITIVE DISPLACEMENT MODEL LO-200 DP
FP-2	B2 LEVEL TRANSFER SET	1800	175	-	200	70	5	480/3	1140 POSITIVE DISPLACEMENT MODEL LO-200 DP
FP-3	B2 LEVEL FUEL MAINTENANCE SET	1200	-	-	200	70	1 1/2	480/3	1140 POSITIVE DISPLACEMENT
FP-4	B2 LEVEL FUEL MAINTENANCE SET	1200	-	-	200	70	1 1/3	-	1140
FP-5	B2 LEVEL FUEL MAINTENANCE SET	1200	-	-	200	70	1 1/3	-	1140 POSITIVE DISPLACEMENT METERING PUMP

NOTES:

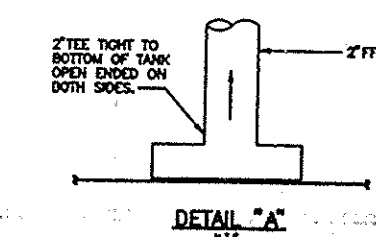
1. ALL PIPING TO THE TANKS EXCEPT FOW WILL BE PROVIDED WITH LINE SIZE GATE VALVES AND ELECTRIC CONTROL VALVES.
2. 3" FOW TO BE PIPED INSIDE THE TANKS DOWN TO 6" ABOVE THE BOTTOM WITH OPEN PIPE.
3. 2" FOS TO BE PIPED INSIDE THE TANKS SO THE BOTTOM OF THE FOOT VALVE IS 6" ABOVE BOTTOM OF TANK.
4. 2" FTS TO BE PIPED DOWN TO BOTTOM OF TANK WITH A TEE FITTING SEE DETAIL "A" THIS SHEET.
5. ALL RETURN AND RELIEF PIPES TO BE OPEN ENDED AS THEY PENETRATE THE TANK ROOF.
6. TANK GAUGES TO BE CENTERED WITHIN TANK AND CLEAR BY 2'-0" OF ANY BRACING FOR CLEARANCE OF WIRE FLOAT



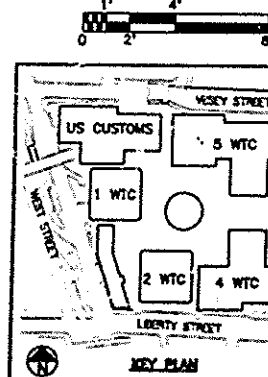
(A) SECTION



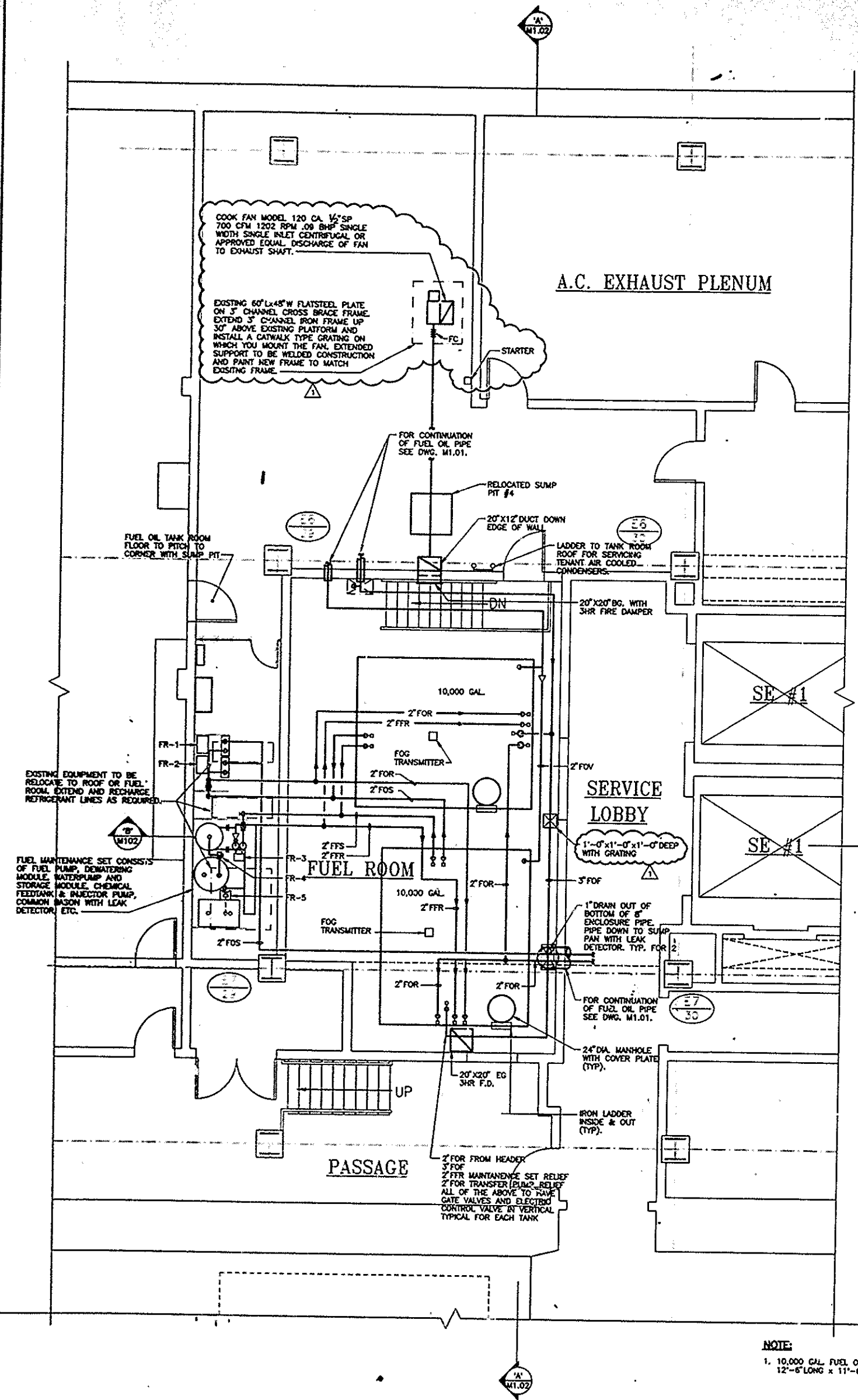
(B) SECTION



DETAIL "A"



KEY PLAN



5 WTC PART PLAN B2 LEVEL
FUEL OIL TANK ROOM

NOTE:
1. 10,000 GAL. FUEL OIL TANKS TO BE
12'-6" LONG x 11'-6" WIDE x 10'-0" DEEP.